

**OCTOBER 28, 2019**

## **HEALTH ADVISORY**

### **Meningococcal Meningitis in North Dakota**

In the past couple of months, the North Dakota Department of Health (NDDoH) has received reports of two laboratory confirmed individuals with meningococcal meningitis, one serogroup B and the other serogroup Y. Prior to 2019, the last cases of meningococcal meningitis in North Dakota were in 2014. The NDDoH is reminding providers to consider meningococcal meningitis as a diagnosis in anyone with clinically compatible symptoms. **Providers should not wait for laboratory results to report suspected meningococcal meningitis cases to the NDDoH (701-328-2378).**

Meningococcal meningitis is a severe infection of the bloodstream and meninges caused by the bacteria *Neisseria meningitidis*. Symptoms can vary by person, but common symptoms include fever, headache, vomiting, stiff neck and a rash. It may also cause sensitivity to light, confusion, drowsiness, seizures and sometimes coma. Symptoms typically appear four days after exposure but can appear anywhere from one to ten days after exposure.

Meningococcal meningitis is spread by direct, close contact with nasal or throat discharges of an infected person. Many people carry meningococcal bacteria in their nose and throat without any signs of illness, while others may develop serious symptoms.

#### **Testing**

Laboratory diagnostics include culturing blood and cerebrospinal fluid of suspected meningococcal meningitis cases. A PCR test may be performed for rapid detection and may aid in the diagnosis if antibiotic therapy was initiated prior to specimen collection. Gram stains of CSF, blood or scrapings from petechial or purpurial lesions may show gram negative intracellular diplococci. Providers and laboratories should keep isolates and specimens and contact the NDDoH Division of Microbiology (701-328-6272) to facilitate additional testing.

#### **Patient Management**

Because of the risks of severe morbidity and death, effective antibiotics should be administered promptly to patients suspected of having meningococcal disease. Multiple antimicrobial agents, including penicillins, are effective against *N. meningitidis*. Empirical therapy for suspected meningococcal disease should include an extended-spectrum

cephalosporin, such as cefotaxime or ceftriaxone. Once the microbiologic diagnosis is established, definitive treatment with penicillin G, ampicillin, or an extended-spectrum cephalosporin (cefotaxime or ceftriaxone) is recommended. Ceftriaxone clears nasopharyngeal carriage effectively after 1 dose; if antimicrobial agents other than ceftriaxone or cefotaxime are used for treatment of meningococcal disease, eradication of nasopharyngeal carriage with rifampin (4 doses over 2 days) or single doses of ciprofloxacin or ceftriaxone are recommended prior to discharge from the hospital. Individuals with meningococcal meningitis should be excluded from school, child care, or the work place until at least 24 hours after antibiotic therapy was started and the illness has subsided.

### **Management of Close Contacts**

Chemoprophylaxis is recommended for the high-risk contacts of meningococcal meningitis cases. Those individuals include:

- Household contacts, especially young children
- Child-care center or nursery school contacts during 7 days before onset of illness
- Direct exposure to index patient's secretions through kissing or through sharing toothbrushes or eating utensils, markers of close social contact, during 7 days before onset of illness
- Mouth-to-mouth resuscitation, unprotected contact during endotracheal intubation during 7 days before onset of illness
- Frequently slept or ate in same dwelling as index patient during 7 days before onset of illness
- Passengers seated directly next to the index case during airline flights lasting more than 8 hours

People in close contact with the two individuals who tested positive have already been contacted and placed on antibiotics to prevent them from getting the disease. A schedule for administering chemoprophylaxis for meningococcal meningitis is posted on the [NDDoH immunization program website](#).

### **Routine Meningococcal Immunization Recommendations**

Meningococcal conjugate vaccine (MCV4) protects against four strains (A, C, Y, and W-135) of *N. meningitidis* and is recommended for all children 11 to 12 years of age. Adolescents should receive a booster dose at age 16. Those who were first vaccinated after age 16 do not need a booster dose. All children entering seventh through tenth grade in North Dakota are required to be vaccinated with one dose of MCV4. Children entering grades eleventh through twelfth are required to be vaccinated with two doses of MCV4. The vaccine is also recommended for individuals who are 21 or younger and living in on-campus housing who have not been previously vaccinated with meningococcal vaccine or received their last meningococcal vaccination more than five years prior to entering college. North Dakota colleges and universities require MCV4 for

students 21 and younger. MCV4 is also recommended for people who travel to certain areas of the world or who remain at risk of meningococcal disease due to a high-risk condition or occupational exposure, such as laboratory workers. Active military personnel are routinely vaccinated with MCV4.

Two vaccines that protect against *N. meningitidis* serogroup B are also available. These vaccines are routinely recommended for people ages 10 and older known to be at increased risk for meningococcal disease, including persons with persistent complement component deficiencies, persons with anatomic or functional asplenia, microbiologists routinely exposed to isolates of *N. meningitidis* and persons identified as at increased risk because of a serogroup B meningococcal disease outbreak. People ages 16-23 who do not fall into one of these categories may also be vaccinated. Men B vaccine is not required for school or college entry in North Dakota.

Please contact the NDDoH Division of Disease Control at 701.328.2378 or toll-free at 800.472.2180 with any questions or concerns regarding this issue.

#### **Sources:**

Centers for Disease Control and Prevention. *Guidance for the Evaluation and Public Health Management of Suspected Outbreaks of Meningococcal Disease*. November 9, 2017. Available at <https://www.cdc.gov/meningococcal/downloads/meningococcal-outbreak-guidance.pdf>.

Centers for Disease Control and Prevention. *Manual for the Surveillance of Vaccine Preventable Diseases. Chapter 8: Meningococcal Disease*. Available at <https://www.cdc.gov/vaccines/pubs/surv-manual/chpt08-mening.html>.

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#### *Categories of Health Alert messages:*

- Health Alert conveys the highest level of importance; warrants immediate action or attention.
- Health Advisory provides important information for a specific incident or situation; may not require immediate action.
- Health Update provides updated information regarding an incident or situation; no immediate action necessary.
- Health Information provides general information that is not necessarily considered to be of an emergent nature.

*This message is being sent to local public health units, clinics, hospitals, physicians, tribal health, North Dakota Nurses Association, North Dakota Long Term Care Association, North Dakota Healthcare Association, North Dakota Medical Association, and hospital public information officers.*